Lloyd's Register

Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk, July 2010

Notice No. 2

Effective Date of Latest Amendments:

See page 1

Issue date: November 2011

Lloyd’s Register is an exempt charity under the UK Charities Act 1993

Lloyd's Register, its affiliates and subsidiaries and their respective officers, employees or agents are, individually and collectively, referred to in this clause as the ‘Lloyd's Register Group’. The Lloyd's Register Group assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register Group entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

RULES AND REGULATIONS FOR THE CONSTRUCTION AND CLASSIFICATION OF SHIPS FOR THE CARRIAGE OF LIQUEFIED GASES IN BULK, *July 2010*

Notice No. 2

This Notice contains amendments within the following Sections of the *Rules and Regulations for the Construction of Ships for the Carriage of Liquefied Gases in Bulk, July 2010.* The amendments are effective on the dates shown:

Chapter	***Section***	***Effective date***
5	5.3	1 January 2012

The *Rules and Regulations for the Construction and Classification of Ships for the Carriage of Liquefied Gases in Bulk, July 2010* are to be read in conjunction with this Notice No. 2. The status of the Rules is now:

Rules for Ships for Liquefied Gases	Effective date:	July 2010
Notice No. 1	Effective date:	1 July 2011
Notice No. 2	Effective date:	1 January 2012

All text which does not appear in the IGC Code is prefixed by 'LR' and thick vertical lines (*see* LR II.3)

Chapter 5

Process Pressure Vessels and Liquid, Vapour and Pressure Piping Systems

Effective date 1 January 2012

5.3 Type tests on piping components

LR 5.3-03 All valves are to be tested at the manufacturer's works to the satisfaction of the LR Surveyor. Testing is to include a hydrostatic test of the valve body at a pressure equal to 1,5 times the design pressure and a seat and stem leakage test at a pressure equal to 1,1 times the design pressure. In addition, cryogenic testing consisting of valve operation and leakage verification for a minimum of 10 per cent of each type and size of valve for valves intended to be used at a working temperature below –55°C.
Alternatively, ~~the manufacturer may request LR to certify a valve subject to the following~~ if so requested by the relevant manufacturer, the certification of a valve may be issued subject to the following:

(a) the valve has been ~~prototype tested~~ approved as required by LR 5.3-01 for valves intended to be used at a working temperature below –55°C; and

(b) the manufacturer has a recognised quality system that has been assessed and certified by LR in accordance with the requirements of Pt 5, Ch 1,6 of the Rules for Ships; and

(c) a quality control plan is submitted which contains a provision to subject each valve to a hydrostatic test of the valve body at a pressure equal to 1,5 times the design pressure and seat and stem leakage test at a pressure equal to 1,1 times the design pressure; the manufacturer is to maintain records of such tests; and

(d) cryogenic testing consisting of valve operation and leakage verification for a minimum of 10 per cent of each type and size of valve for valves intended to be used at a working temperature below –55°C to the satisfaction of the LR Surveyor.

LR 5.3-04 Each size and type of cargo pump is to be approved through prototype testing and is to include a hydrostatic test of the pump body equal to 1,5 times the design pressure and a capacity test. ~~For pumps intended to be used at a working temperature below –55°C, the capacity test is to be carried out at the minimum working temperature using the fluid for which the pump is intended.~~ For submerged electric motor driven pumps, the capacity test is to be carried out with the design medium or with a medium below the minimum working temperature. For shaft driven deep well pumps, the capacity test may be carried out with water. In addition, for shaft driven deep well pumps, a spin test to demonstrate satisfactory operation of bearing clearances, wear rings and sealing arrangements is to be carried out at the minimum design temperature. The full length of shafting is not required for the spin test, but must be of sufficient length to include at least one bearing and sealing arrangement. On completion of testing, the pump is to be opened out for examination. Prototype testing is to be completed to the satisfaction of the LR Surveyor. In lieu of prototype testing, satisfactory in-service experience, of an existing pump design approved by a Classification Society submitted by the manufacturer may be acceptable.

LR 5.3-05 All cargo pumps are to be tested at the manufacturer's works to the satisfaction of the LR Surveyor. Testing is to include a hydrostatic test of the pump body equal to 1,5 times the design pressure and a capacity test. ~~For pumps intended to be used at a working temperature below –55°C, the capacity test is to be carried out at the minimum working temperature.~~ For submerged electric motor driven pumps, the capacity test is to be carried out with the design medium or with a medium below the minimum working temperature. For shaft driven deep well pumps, the capacity test may be carried out with water.
Alternatively~~ the manufacturer may request LR to certify a pump subject to the following:~~, if so requested by the relevant manufacturer, the certification of a pump may be issued subject to the following:

(a) the pump has been ~~prototype tested~~ approved in accordance with the requirements in LR 5.3-04; and

(b) the manufacturer has a recognised quality system that has been assessed and certified by LR in accordance with the requirements of Pt 5, Ch 1,6 of the Rules for Ships; and

(c) a quality control plan is submitted which contains a provision to subject each pump to a hydrostatic test of the pump body equal to 1,5 times the design pressure and a capacity test. The manufacturer is to maintain records of such tests.

© Lloyd's Register, 2011
Published by Lloyd's Register
Registered office
71 Fenchurch Street, London, EC3M 4BS
United Kingdom